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189	9.] NATURAL SCIENCES OF PHILADELPHIA. 438
4.	Shining black, with middle segment, legs and petiole red,
	Otherwise colored
5.	Front and clypeus striated striatifrons $\circ \circ$
	Front and clypeus not striated, simply punctured
	$rufipes \ \center{C}$.
6.	Middle segment not sharply carinate, nor indeed carinate,
	unless the angular crest of the two faces of the middle seg-
	ment be called a carina
	Middle segment distinctly carinated on each face 14
7.	Postscutellum carinate, but not very distinctly, at sides . 8
	Postscutellum emarginate or dentate
8.	Dorsulum finely striated longitudinally thoracicus \circ .
	Dorsulum sculptured otherwise 9
9.	Enlargement of first segment slender, elongate
	cylindricus $\mathop{\supsetneq}$ $\mathop{\circlearrowleft}$.
	Enlargement of first segment shorter, robust 10
10.	Front and clypeus striated
	Front and clypeus punctate imperfectus φ .
11.	Enlargement of petiole broadest anteriorly, sides converging
	apically, not rounded outwardly cristatus \(\varphi \).
	Enlargement of petiole ovate or subcampanulate, sides strongly
10	rounded campanulatus $\mathcal{P}_{\mathcal{J}}$. Ornamented with rufous
12.	Ornamented with rutous
10	Not at all rufous (front and clypeus striated) . hexagonus φ . Front rather finely striated bicolor $\varphi \circ$.
15.	Front coarsely striated $productus \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$
11	Enlargement of petiole very coarsely punctured, subtruncate
17.	anteriorly notatus ♀♂
	Enlargement of petiole strongly, but not coarsely punctured,
15.	rounded anteriorly
	Pronotum spinose or subspinose
16.	Only the apex of petiole maculated with yellow. corirarius \(\varphi\).
	Thorax and abdomen at apex of all segments, yellow
	$diminutus \ \circ.$
17.	Body of petiole tolerably stout, ovate
	Body of petiole tolerably stout, ovate

• . 1

18.	Clypeus punctured like front; dorsulum with a slender, raised
	line anteriorly in middle; sides of clypeus yellow
	$rugosiceps \ \ $
	Clypeus with deep, separated punctures, front rugoso-punctate;
	clypeus not yellow, except anterior margin in \mathcal{J} .
	$proximus \ \ \circlearrowleft .$
19.	Head and thorax above without yellowish-brown hair . 20
	Head and thorax above with dense yellowish-brown hair;

- 22. Wings blue-black. Length 18-21 mm. . punctatus ♀♂. Wings subhyaline, costal margin fuscous. Length 14 mm.

emarginatus \mathcal{E} .

Labus brasiliensis n. sp.

Head black, clypeus except medially, transverse spot behind the antennæ, the eye emarginations, mandibles except apex, scape except a line above, broad stripe on cheeks, a large spot beginning at summit of eyes and extending toward middle of occiput, bright vellow; thorax black, pronotum entirely, two lines on dorsulum, two spots on scutellum, and postscutellum, tegulæ, large spot beneath wings, middle segment except sides and in medial sulcus, all the coxe and trochanters more or less, the four anterior femora except basally, the hind pair except a stripe above, all the tibiæ and tarsi, except a stripe on hind tibiæ, bright yellow; petiole except a medial and lateral stripe, second segment beneath except two spots beyond middle laterally, and above except base and greater part of disc, and the remaining segments more or less, bright vellow; in the male the black spots of second ventral segment are spread out so as to cover most of the segment; flagellum rufous beneath, black above; wings pale fulvo-hyaline, stigma vellowish.

\$\times\$.—Head with strong, separated punctures, those on cheeks finer; clypeus rather small, almost as long as broad, the fore margin tridentate, the medial tooth indistinct; a strong carina

divides the bases of antennæ and extends slightly on the clypeus; flagellum clavate, the first joint about as long as the two following united; space between hind ocelli less than that between them and eyes; pronotum cristate, rather square anteriorly in consequence of the strongly angulate sides; dorsulum longitudinally rugosostriate, with two longitudinal raised lines or swellings medially, anteriorly in the middle with a fine raised line, and with a polished tubercle at each side close to the tegula; scutellum broadly sulcate down middle, on each side of which it is polished; postscutellum broadly and angularly emarginate; middle segment rugose, but rather finely, with a deep, rather broad medial furrow which is bounded by a high crista on each side, the lateral carina sharp, foveolate externally, sides with some coarse striæ; petiole elongate, linear, not swollen or nodose, narrowed toward base on its anterior third, in length longer than thorax, subdentate on each side before middle, beneath strongly carinate down middle, at apex with a broad shallow depression; second segment above finely and closely punctured, beneath shining with larger, sparse, punctures, pedicel rather robust, long, but barely half as long as first hind tarsal joint, the segment gradually dilated; radial side of second submarginal cell about equal to the distance between the first transverso-cubital and first recurrent nervures on the cubital nervure; third submarginal cell a little narrowed above, rhomboidal, the outer nervure sinuous. Length 14 mm.

♂.—More coarsely sculptured. Clypeus entirely yellow, more than twice as broad as long, with two acute teeth anteriorly; first joint of flagellum shorter than the two following united, the ultimate joint obtuse at tip, longer than the penultimate, the two together nearly as long as joints 10 and 11 united; lateral angles of pronotum acute and prominent; middle segment above with coarse rugæ. Length 12 mm.

Chapada, September; Santarem. The \mathcal{D} specimen comes from the former, the \mathcal{O} from the latter locality.

Saussure's suggestion that the genera *Elimus* and *Labus* might be united is worthy of further thought. In fact it is difficult to understand why *Elimus* and *Labus* should be considered distinct from *Zethus*.

¹ Synopsis American Wasps, p. 56.

ZETHOIDES gen. nov.

Allied to Zethus which it greatly resembles superficially, and seems to differ only in the following points: Middle tibiæ one-spurred; labrum broadly truncate; mandibles elongate, with four large teeth reaching from apex half way to base on inner margin. In the only species known, the clypeus is armed with two large prongs, between which it is broadly incurved, and all the tarsi are flattened and short; but these are probably sexual characteristics. Female unknown.

In the shape of mandibles this genus would fall in Saussure's "Legion II. The Odynerites," while the shape of abdomen, with its pedicellated second segment indicates its affinities with "Legion I. The Zethites." As it stands, Zethoides must be considered a connecting link between these two Legions. The palpi agree with those of Zethus in the number of joints, those of the labial palpi in length are as follows: the first longest, the second shorter, but longer than the two following united, the last smallest, quite minute.

Zethoides Smithii n. sp.

Black; antennæ entirely, cheeks, base of clypeus, most of pronotum, outer margin of tegulæ and legs more or less, fulvous; clypeus, scape beneath, mandibles, eye emargination, dots at summit and behind eyes, anterior margin of pronotum, spot under wing, two dots on scutellum and postscutellum, stripe on four anterior tibiæ and medially interrupted line at apex of petiole, yellow; wings subhyaline, brownish along costal margin.

Mead with strong, not coarse, sparse punctures; clypeus finely and closely punctured the fore margin armed with two huge spines or teeth, between which the clypeus is roundly emarginate; antennæ curled at tip, the ultimate joint robust, broadened and truncate apically, fully as long as the two preceding ones united, penultimate joint smallest, the ninth emarginate so that the apical one in consequence of the rolling up of the tip of antenna fits into the emargination, first joint shorter than the two following united; space between hind ocelli much less than that between them and eyes; parted by a furrow which extends back on the occiput; pronotum cristate, dentate at sides, with shallow punctures; dor-

² Synopsis American Wasps, p. 59.

sulum with larger shallow punctures, with a slender raised line anteriorly in middle, the usual posterior impressions indistinct or wanting, on each side near the tegula there is a short, fine, raised line; scutellum convex, impressed; postscutellum carinate laterally, with a small tubercle medially; middle segment concave medially, the concavity bounded outwardly by a sharp carina, beginning at each side of postscutellum in the shape of a lamella and gradually decreasing to a slender ridge, space between these and the sharp lateral carina rugoso-punctate, sides a little roughened apically, lateral carina reaching to the insertion of abdomen gradually increasing in height from base until it is almost laminate at apex; tarsi flattened, unusually short, hind tibiæ more or less distorted, the outer margin being strongly sinuate; petiole with stem short and thick, the enlarged portion strongly punctured, rounded at base, the sides only narrowed to apex from their apical fourth, and then only slightly; second segment above with shallow punctures, beneath with large sparse punctures, the stem short and thick; second submarginal cell with a radial side a little shorter than the distance between the first transverso-cubital and first recurrent nervures on the cubital nervure; third submarginal cell subquadrate, oblique, broadened above, the outer nervure angulate medially. Length 16 mm.

Chapada, March. Two specimens.

- A. Petiole of abdomen with a long slender base, swollen at apex, more or less campanulate.
 - a. Head from front as long as broad.

Eumenes chrysothorax Sauss.

One specimen. Corumbá, April.

Eumenes sericea Sauss.

Same locality and month as the preceding; also Santarem. Four specimens.

Eumenes bipartita n. sp.

\$\varphi\$.—Black, with sericeous pile; mandibles yellow, black within basally, reddish at apex; flagellum beneath near apex, four anterior tibiæ and tarsi more or less, and a ring on petiole near base, reddish; front subconvex with indistinct, shallow punctures, medially impressed; ocelli in a curved line; clypeus feebly punc-

tured, pyriform, bicarinate apically, the carinæ terminating in sharp teeth separated by a notch; thorax except scutella and middle segment impunctate; pronotum margined; middle segment broadly and shallowly channelled, with rather strong distinct punctures except on sides which are nearly smooth; petiole campanulate, about as long as that portion of thorax posterior to dorsulum, with tolerably strong separated punctures, furrowed transversely before apex and above with a broad shallow, rather indistinct furrow; remainder of abdomen elongate-ovate, above densely punctured, beneath almost impunctate; wings on basal half blackish with purplish reflection, apically subhyaline; stigma brownish. Length 15 mm.

Corumbá, April. One specimen.

Eumenes testacea n. sp.

- J.—Testaceous yellow, the first and second segments except apices, brownish; flagellum reddish; a semicircular mark on vertex terminating at each side at a point opposite the eye-emargination and curving backward so as to include the hind ocelli, and being connected by a narrow line to a similarly colored curved line on occiput, a spot in front of the anterior ocellus, three stripes on dorsulum, spot on pronotum at each side and spot on scutellum, black; middle segment with a brownish mark on each side; front convex, medially impressed; with strong separated punctures; clypeus elongate, subacuminate, impunctate, much longer than broad, apically with two carinæ terminating in short approximate teeth; ocelli forming a triangle; flagellum long, scarcely thickened; pronotum margined, not angulate; dorsulum, scutellum and postscutellum more strongly punctured than front; scutellum subconvex, not impressed; middle segment less strongly punctured than dorsulum, feebly so on sides, the medial furrow deep; petiole campanulate, short, about as long as that portion of thorax posterior to base of scutellum, feebly punctured, and just before apex above with a deep pit; dorsal surface of remainder of abdomen with feeble shallow punctures, the ventral surface nearly impunctate; wings subhyaline, slightly yellow along costa; nervures and stigma yellow testaceous. Length 12 mm.
- ♀.—Colored and sculptured like ♂, but the wings with a yellowish cast and darkened apically; flagellum shorter, subclavate.

Santarem. One \mathfrak{P} , two \mathfrak{S} specimens. The clypeus is much longer and narrower than in E. sericea Sauss., and the black markings of vertex and reddish flagellum are good superficial characteristics.

Eumenes lævis Sauss.

Corumbá, Pedra Branca and Mararú, April; Santarem. Nine specimens.

Eumemes novaræ Sauss.

Chapada, December; Santarem. Six specimens. Strongly resembles *E. lævis*, from which it may be readily separated by distinctly punctured abdomen and want of maculation on middle segment.

Eumenes insignis n. sp.

♀.—Deep black, covered with sericeous gray pile especially on abdomen; spot behind base of antennæ, in the emargination of and behind summit of eyes, narrow interrupted line on pronotum both anteriorly and posteriorly, dot behind tegulæ, two spots on postscutellum, a mark near the base of petiole above, in the shape of an inverted U, and a narrow line at apical margin, yellow; remaining segments entirely black, the petiole beneath reddish; flagellum at base beneath, tibiæ and tarsi, more or less marked with blackish, reddish; front with distinct, though not coarse separated punctures, medially impressed; ocelli in a curved line; clypeus elongate pyriform, flattened, finely punctured with two long carinæ anteriorly, equalling at least one-half its length, and terminating in two large acuminate teeth; thorax densely punctured, especially on middle segment where the punctures are strongest; pronotum margined anteriorly; dorsulum with a slender smooth line anteriorly in middle; scutellum with a short feeble longitudinal carina at base, which is followed by a shallow sulcus reaching to apex; sulcus of middle segment not very broad; petiole shorter than thorax, gradually broadened from its basal third to apex, not impressed, but transversely depressed before apex, with widely separated punctures above; remainder of abdomen rather fusiform but broadest toward base, impunctate; anterior wings fuscous on basal two-thirds, and along anterior margin of hind wing, otherwise subhyaline; nervures black, the stigma brown medially. 14-15 mm.

♂.—Basal half of flagellum beneath, and terminal joint, reddish yellow; clypeal carinæ almost obsolete barely evident except on apical teeth; punctuation coarser than in ♀; petiole above slightly longitudinally impressed medially; wings darkened along costal margin only; clypeus, except apex line on scape and apical margin of sixth ventral segment, yellow; seventh ventral smooth, broadly rounded at apex. Length 13 mm.

Chapada, March, October, November. Two examples of each sex.

Eumenes læviventris n. sp.

- ♀.—Black, clothed with sericeous gray pile; a spot in the sinus of eye, short line on orbits behind and at sides of face, dot at summit of eye, posterior margin of pronotum medially, dot behind tegulæ, two spots on scutellum, spot on four hind coxæ and at tips of four anterior femora, stripe on all tibiæ and narrow line at apex of petiole, yellow; flagellum beneath except medially, fulvous; petiole ringed with reddish near base; front with distinct separated punctures; ocelli in curved line; clypeus broad, subcordate, finely punctured, convex, not carinate, terminating in two acute teeth; pronotum with shallow, subtile punctures, very finely margined; dorsulum with stronger, scattered punctures, anteriorly in middle with an impressed line, and at apex with four short, stronger impressions, of which the two inner are most approximate; scutellum subcarinate basally, impressed apically; middle segment with strong, separated punctures, broadly depressed or concave, the medial furrow distinct, foveolate; petiole almost or quite as long as thorax, more rapidly enlarged than in E. insignis, impunctate, transversely depressed before apex; remainder of abdomen ovate, smooth; wings broadly fuscous along costal margin as far as stigma, the latter brownish or blackish as well as nervures. Length 13-15 mm.
- \circlearrowleft .—Clypeus entirely, inner orbits of eye from base of clypeus to within the emargination, scape beneath, spot behind base of antennæ, two spots on pronotum anteriorly, and rarely two spots on middle segment, yellow; on the legs this color is much more widely distributed than in $\,^{\circ}$; clypeus smaller, roundly emarginate at apex, the carinæ almost obsolete; seventh ventral segment furrowed down middle. Length 13–15 mm.

Corumbá, April. Two \mathcal{P} , eight \mathcal{S} specimens. This species bears a strong resemblance to E. insignis, with which I had at first confused it, but they differ in the shape of clypeus in female, and in the punctate petiole of insignis, the abdomen of læviventris being entirely smooth.

Eumenes convexa n. sp.

∂.—Black, with sericeous pile, that on second segment golden; spot in eye-emargination, behind base of antennæ, scape beneath, clypeus entirely, base of mandibles, anterior and posterior margins of pronotum, outer margin of tegulæ, dot behind them, anterior margins of scutellum and postscutellum, spot on mesopluræ above, four anterior femora beneath except at base, all tibiæ except inner stripe, petiole above except at base and an elongate medial stripe, and apical margins of remaining segments broadly, especially the second, bright yellow; flagellum on basal half and tarsi reddish or fulvous; front with strong separated punctures; ocelli in triangle; clypeus impunctate, terminating in two rather widely separated teeth which are preceded by feeble carinæ; antennal hook large; thorax strongly punctured, the dorsulum sparsely in middle; pronotum margined, the antero-lateral angles somewhat developed, scutellum convex, impressed; middle segment depressed or concave, especially toward apex; medial femora unusually broadened toward base; petiole longer than thorax, gradually broadened from beyond its basal third, impunctate, transversely depressed before apex; remainder of abdomen somewhat pyriform, smooth, with exception of a few large punctures before apex of dorsal segments; seventh ventral with a triangular depressed area; second segment evenly convex when viewed from side; wings subhyaline, fuscous in costal and marginal cells; nervures and stigma black. 11-12 mm.

Santarem, November. Two specimens.

Eumenes superficialis n. sp.

\$\varphi\$.—Black, with sericeous pile longest on middle segment and golden on abdomen; inner orbits from base of clypeus to within eye-emargination, dot behind insertion of antennæ, dot on each side of clypeus basally and at summit of eyes, short line on posterior orbits, posterior margin of pronotum, dot at apex of tegulæ, one behind these, line basally on scutellum and postscutellum, tips of

all femora, stripe on all tibiæ (tarsi dark), line at apex of petiole, and remaining segment broadly, bright yellow, that on second dorsal covering at least one-third its surface and angularly produced anteriorly in middle, and produced anteriorly along sides of segment; flagellum fulvous beneath; front strongly punctured, prominent on each side, so that it possesses apparently two diverging carinæ originated at each side of fore ocellus; clypeus with fine dense punctures, but little longer than broad, terminating in two rather approximate, short teeth, not carinate, evenly convex; thorax with deep punctures, those on pronotum closest; the latter margined anteriorly; scutellum having the largest punctures, impressed; middle segment depressed down middle, but hardly concave; petiole about as long as thorax, evenly dilated from about middle, the enlarged portion sparsely punctured, not distinctly transversely depressed before apex, but with a fovea or pit at its summit; second segment, seen from side, elongate, above and beneath between base and apex apparently subangulate, the contour of the second ventral is decidedly sinuous as the segment is depressed medially; second dorsal densely punctured; wings pale fusco-hyaline, the costal and marginal cells pale yellow; stigma brown; nervures darker. Length 11 mm.

3.—Base and sides of clypeus yellow; flagellum more fulvous beneath; a dot sometimes on mesopleuræ and line on each side of fore margin of pronotum, yellow; antennal hook very slender, spine-like, the preceding six or seven joints minutely dentate beneath; medial femora slender, not unusually widened at base; seventh ventral segment small, smooth. Length $10\frac{1}{2}$ mm.

Corumbá, April; Chapada, December. One \mathcal{P} , two \mathcal{O} specimens. The resemblance borne by this species to *convexa* is only superficial.

Eumenes usitata n. sp.

\$\varphi\$.—Black; head and thorax rather densely clothed with pale sericeous pile; spot in emargination of eye, behind base of antenne, an angular line on clypeus laterally, scape beneath, hind orbits above, interrupted line on pronotum anteriorly, its posterior margin, two spots, or a line, on anterior margin of scutellum and postscutellum, spot beneath wing, and on four hind coxe, narrow interrupted line on sides of petiole, line at apex and a line just

before apical margins of segments 2-5, yellow; flagellum beneath basally fulvous; four anterior femora beneath, the hind pair at apex, tibiæ and tarsi entirely, outer margin of tegulæ, reddish; mandibles reddish, black at base with a yellow dot; front distinctly punctured; clypeus elongate, somewhat pyriform, finely and closely punctured, with two carinæ anteriorly terminating in two well-separated teeth; thorax strongly punctured especially the middle segment, the punctures finest on pronotum, which is barely margined; scutellum indistinctly impressed; middle segment but little depressed, its punctures more or less confluent; petiole fully as long as thorax, gradually dilated from its basal third, almost impunctate or very subtilely punctured, transversely depressed before apex; remainder of abdomen somewhat pyriform, indistinctly punctured; wings subhyaline, the costal margin narrowly and the marginal cell fuscous; nervures and stigma black. Length 12 mm.

 \mathcal{S} .—Clypeus entirely, and two spots at extreme base of middle segment laterally, yellow, in addition to the parts mentioned in description of female; the spot behind base of antennæ is continued down to base of clypeus, and the reddish of legs is more widely distributed; clypeal carinæ almost obsolete; tegulæ fulvous or reddish; medial femora a little widened basally; petiole longer than thorax; seventh ventral crossed by a carina some distance beyond base, before this carina the surface is dull, opaque, beyond it shining, punctate; wings a little darker throughout than in \mathcal{P} , stigma dark brown. Length 11–12 mm.

Corumbá, April, May; Santarem. One \mathcal{D} , twelve \mathcal{D} specimens. Related to E. incerta and lavis Saussure; the petiole is longer and more slender than in the latter, and the thorax is more maculated than in incerta, in which species the clypeus is broader with the carinæ (comparing females) stronger.

Eumenes incerta Sauss.

One \mathfrak{P} , two \mathfrak{P} specimens. Rio de Janeiro, November. The female, which has not been described, is very close to E. usitata, but the punctures of middle segment are more separated and less coarse; other differences are pointed out in the note accompanying the description of usitata. The seventh ventral of \mathfrak{P} is bituberculate near base.

Eumenes callimorpha Sauss.

Mararú, April; Santarem. Seven specimens, all females.

Eumenes picturata n. sp.

Q.—Yellow and black; head yellow, with the front and face, except a triangular spot between insertion of antennæ, and occiput black; clypeus sometimes with an elongate black mark; scape above and joints 2-8 of flagellum above black, the flagellum otherwise fulvous; thorax vellow, a dot on each side of pronotum, the dorsulum except two lines, spot on scutellum, black; tegulæ brownish medially; legs entirely yellow; petiole yellow, except the black base, and a brown blotch above, yellow; remaining segments black, with apical margins broadly yellow, as well as sides of second dorsal, the second ventral brownish; front with strong, separated punctures; ocelli in curved line; clypeus convex, microscopically punctured, almost as broad as long, terminating in two large teeth, not carinated; pronotum with shallow punctures, very finely margined; dorsulum with stronger, deeper punctures, which are closest at apex; scutellum strongly punctured, deeply impressed; middle segment concave posteriorly, with rather large shallow, separated punctures, closest toward base; petiole a little shorter than thorax rather gradually enlarged from a point just before its middle, elongate campanulate, impunctate, transversely depressed before apex; remainder of abdomen fusiform, impunctate, with sericeous pile; wings subhyaline, yellowish along costal margin, the nervures and stigma reddish brown. Length 14-15 mm.

♂.—Coloration like that of ♀, with second ventral segment yellow; clypeus narrow, triangularly notched at apex; medial femora not widened basally; petiole fully as long as thorax; seventh ventral segment deeply and narrowly sulcate down middle, the sides of the furrow raised so that two parallel carinæ are present. Length 14 mm.

Pedra Branca and Corumbá, in April. Two $\mathfrak P$, one $\mathfrak P$ specimens. Eumenes consobrina Sauss.

Corumbá, March, April; Rio de Janeiro, November. Fourteen specimens. In the 3. the seventh ventral is sulcate down middle.

Eumenes parvula Sauss.

Corumbá, April, May; Chapada, January, April, December; Rio de Janeiro, November. Fourteen specimens.

Eumenes suffusa n. sp.

Q.—Black, variegated with rufous; head black, a rufous spot between antennæ and on clypeus medially; sides of clypeus, dot in eye-emargination, hind orbits above, spot near base of clypeus, pale yellow; scape except above at apex, and flagellum beneath reddish; thorax with glittering pile, longest on middle segment; pronotum except a spot on each side, two lines on dorsulum, scutellum and postscutellum entirely, middle segment except medially and sides, greater part of mesopleuræ and coxæ and legs except femora above, petiole at sides and apically, second and third dorsals apically, two large blotches on second ventral, and segments 4-6, dull rufous; a yellow line at apex of petiole and just before apex of second segment; front with rather strong, separated punctures, covered in certain lights with silky pile pertaining slightly to golden; clypeus flat, sparsely punctured, pyriform, not or indistinctly carinate, terminating in two triangular teeth; ocelli in curved line; flagellum clavate; thorax strongly punctured, most closely on pronotum, the latter distinctly margined; punctures of dorsulum quite coarse posteriorly as are those of scutellum which is indistinctly impressed; middle segment broadly depressed or subconcave; petiole hardly as long as thorax, narrowly campanulate, strongly punctured, gradually enlarged from a point before terminus of its basal third, narrowly transversely depressed before apex; second dorsal more closely punctured, the remaining dorsals more finely, ventrals impunctate; wings subhyaline, broadly dark fuscous along costal margin and in marginal cell; stigma brownish; nervures dark. Length 9 mm.

S.—Clypeus entirely yellow, longer than broad, widely and triangularly notched at apex; petiole fully as long as thorax; seventh ventral plate with a basal carina which terminates in a tooth or sharp tubercle medially. Length 9 mm.

Corumbá, April; Chapada, November, December. Eleven \mathcal{F} , three \mathcal{F} specimens. Compared with E uruguayensis Sauss., with which suffusus is closely related, the clypeus is a little longer and narrower, the front has sericeous pile, the petiole is stouter with the swollen portion larger though less convex and punctuation of second dorsal is stronger. The coloration of both species is remarkably similar, but in uruguayensis there is no black on pronotum and no red on scutellum and the apical segments are dark.

Eumenes uruguayensis Sauss.

Chapada, November, December. One of each sex. The male which is not yet described closely resembles E. suffusa, with the pronotum entirely rufous; clypeus black, marked with yellow on each side, armed at apex with two widely separated teeth, almost as broad as long; scutellum red, distinctly impressed; as in the \mathcal{P} , the petiole is much smaller than in suffusa; base of second dorsal impunctate; seventh ventral not carinate, smooth; third submarginal cell shorter than in suffusa. Length 8 mm.

Eumenes compacta n. sp.

Q.—Black; head, thorax on sides and posteriorly, and abdomen with thin silky pile, that on middle segment brightest and longest; spot between antennæ, in the emargination of eye, on base of mandibles, on sides of clypeus sometimes, short line on hind orbits above, line at apex of petiole and before apex of second segment, yellow; antennæ beneath, greater part of mandibles, pronotum except a blotch on each side, sides of scutellum and postscutellum sometimes, two comparatively small blotches on middle segment, spot at top of mesopleuræ (sometimes wanting), tips of femora, except posteriors, tibiæ except a stripe internally, tarsi, and petiole at apex beneath and on sides slightly, rufous; apical segments margined with testaceous; front strongly punctured; ocelli in a curved line; clypeus apparently very finely striato-punctate longitudinally, almost as wide as long, terminating in two sharp teeth preceded by a carina which becomes gradually obsolete toward middle of clypeus; thorax deeply punctured, the pronotum most closely, the latter margined and with the lateral angles prominent, though obtuse; dorsulum with three parallel impressions posteriorly; scutellum indistinctly impressed; middle segment depressed or subconcave posteriorly; petiole elongate campanulate, gradually enlarged from its basal third, the enlargement strongly punctured and highly convex, transversely depressed before apex; second dorsal closely punctured except at base, the third and fourth dorsals less closely; wings subhyaline, broadly fuscous along costa and in marginal cell; stigma and nervures blackish. Length 9 10 mm.

♂.—Colored like ♀, with the rufous of thorax more diffused, the hind margin of pronotum and a spot at each antero-lateral

angle, and a line on dorsals 3-6 before apex, yellow; sculpture coarser; clypeus with the teeth widely separated, the carinæ only evident on them; medial femora not widened basally; seventh ventral segment smooth, or finely punctured, slightly emarginate on each side before apex, so that it appears produced in middle at apex. Length 9 mm.

Corumbá, April; Chapada, November, December. Four \mathcal{D} , one \mathcal{D} specimens. This is a more robust species than suffusa or uruguayensis.

aa. Head from front broader than long.

1. Second segment evenly convex above and beneath.

Eumenes colorata n. sp.

- Q.—Head yellow, the front, vertex and occiput black; mandibles except base, a central longitudinal line on clypeus and flagellum beneath ferruginous; thorax, except the black dorsulum, yellow, a ferruginous stain on each side of pronotum, scutellum apically except a small black spot, and sides of thorax and middle segment indistinctly; coxæ and femora above pale ferruginous; basal one-fifth of petiole black, the remainder pale ferruginousyellow, with a yellow apical border; remaining segments black, margined with yellow; front with strong separated punctures with golden pile; ocelli in a curved line; clypeus subquadrate, sparsely punctured, with two sharp approximate teeth at apex; flagellum subclavate (?), (joints 9-11 missing); thorax much longer than broad, with strong punctures, those on scutellum largest; pronotum scarcely margined; middle segment broadly depressed or shallowly concave posteriorly, with thin golden pile, sides sparsely punctured; petiole a little longer than thorax, with sparse punctures, narrow, somewhat clavate, being gradually broadened from a point beyond its basal third, transversely impressed before apex; remainder of abdomen short ovate with brownish sericeous pile; second dorsal with shallow separated punctures; wings subhyaline, faintly tinged with yellowish in costal cell; nervures and stigma brownish. Length 11½ mm.
- ♂.—Colored like ♀, except that the black of front extends as far as base of clypeus on each side of insertion of antennæ; the ferruginous more pronounced on thorax, forming the background for the yellow which appears as maculations; flagellum almost

entirely reddish; medial femora not enlarged basally; seventh ventral segment elongate, truncate, depressed, except at sides and base; stigma yellowish. Length 11 mm.

Chapada, September; Santarem. One of each sex.

Eumenes tinctura n. sp.

Q.—Black; pronotum, mesopleuræ, the scutella, postero-lateral angles of middle segment, four anterior femora except base, tibiæ, petiole medially, and antennæ, except flagellum above from second and third joints, rufous; sides of clypeus, spot between insertion of antennæ, one almost filling the eye-emargination, hind orbits above, hind margin of pronotum, line on both scutella anteriorly, and a rather broad apical band on segments 1 and 2 emarginate anteriorly in middle, yellow; remaining segments margined with testaceous; front with tolerably strong, separated punctures, with silvery sericeous pile; ocelli in curved line; clypeus convex, impunctate, but slightly longer than broad, with two short, approximate teeth at apex separated by a rounded notch; flagellum clavate; thorax with strong, separated punctures, those on scutellum largest; pronotum finely margined; middle segment broadly depressed posteriorly; petiole distinctly longer than thorax, broadened from just before its middle, strongly punctured, basal stem slender, a rounded pit in the middle before apical margin, before which on each side of pit is a transverse depression; remainder of abdomen ovate, second dorsal less strongly and more closely punctured than petiole; wings subhyaline, fuscous in costal and marginal cells, but this clouding does not fill them completely; nervures and stigma black. Length 8 mm.

Corumbá, April. One specimen. A male specimen from Chapada (January), I refer doubtfully to this species; it is similarly colored, but the red of mesopleuræ is confined to the top, the petiole is rufous apically, the clypeus entirely yellow with the abdominal segments all margined with that color, which is also commingled with the rufous on mesopleuræ, middle segment, femora and tibiæ; postero-lateral angles of middle segment somewhat compressed; seventh ventral segment rounded at apex, indistinctly depressed or furrowed medially. Length 10 mm.

Eumenes invenusta n. sp.

Q.—Black, with thin cinereous pile; spot between insertion of antennæ, in emargination of eye, sides of clypeus narrowly, scape

beneath, hind orbits, posterior margin of pronotum, tips of all femora, especially the anteriors, fore tibiæ except internally, stripe on medial tibiæ externally, a narrow medially interrupted line at apex of petiole, and a line before apex of following segments, yellow; apex of segments testaceous; flagellum fulvous beneath; front with strong, rather even punctures, indistinctly impressed; ocelli forming a curved line; clypeus indistinctly punctured, convex, a little longer than broad, with two small approximate teeth at apex; thorax longer than broad; punctures of pronotum somewhat stronger than those of front, while those of dorsulum are still stronger than on pronotum; the latter finely margined anteriorly; scutellum not impressed, strongly punctured; middle segment with strong deep punctures rather evenly separated, posteriorly shallowly depressed, with a short strong carina on each side of insertion of petiole; the latter a little longer than thorax gradually enlarged from a point before its middle, sparsely and rather indistinctly punctured, the enlargement convex, but not highly so, transversely depressed before apex, stem slender; remainder of abdomen ovate, the second dorsal closely and distinctly punctured; other segments not distinctly punctured; wings subhyaline, the anterior portion of costal and marginal cells slightly darker; nervures and stigma black. Length 10 mm.

Santarem. One specimen. Related to confluenta and proxima, differing from both in its longer thorax and petiole.

Eumenes confluenta n. sp.

♀.—Black, clothed with grayish sericeous pile; sides of clypeus, spot between antennæ, in the eye-emargination, hind orbits, scape beneath, anterior and posterior margins of pronotum rather broadly, both scutella anteriorly, spot on petiole before middle, and apical margins of segments 1–5, yellow, that on segments 1 and 2 brightest; flagellum beneath, femora and tibiæ more or less, outer edge of tegulæ, and petiole beneath on apical half reddish yellow; front with strong more or less confluent punctures; clypeus convex, finely punctured, medially produced at apex, the production marked by two short carinæ which give it the appearance of being bidentate; thorax but little longer than broad, strongly punctured, most strongly on scutellum; the latter impressed; pronotum finely margined; middle segment with the punctures finer and perhaps

closest, posteriorly depressed; petiole longer than thorax, narrowly elongate campanulate, enlarged from about middle, with strong separated punctures, transversely depressed before apex, basal stem rather slender; remainder of abdomen ovate; second dorsal finely and closely punctured; wings subhyaline, the costal margin narrowly and the marginal cell in part fuscous; nervures and stigma blackish. Length 9 mm.

S.—Clypeus, except apex, yellow; otherwise colored like female, with the maculation, if anything, less marked; no yellow on scutellum; sculpture stronger, especially evident on second dorsal segment; wings darker; seventh ventral segment rounded apically; punctures of front well separated, not confluent. Length 9 mm.

Santarem. One of each sex. That which I have described as the \varnothing will perhaps prove to be a different species; it is referred here with much doubt.

Eumenes proxima n. sp.

Q.—Black; clothed with grayish sericeous pile, that on head in front and middle segment silvery; clypeus at sides, spot between antennæ, in emargination of eye, hind orbits narrowly, scape beneath, broadly interrupted line on pronotum anteriorly, posterior margin, dot behind tegulæ, short line or spot at tips of femora beneath, line on all tibiæ, first joint of tarsi except apically, spot on petiole above near bases, and line at apex of segments 1-5, pale yellow, that on petiole extended a short distance anteriorly along sides; scape beneath fulvous; front with strong, separated, even punctures, scarcely impressed; ocelli in curved line; clypeus convex, fully as broad as long, with indistinct scattered punctures, produced medially at apex, the production depressed medially, so as to appear bicarinate, the apex scarcely notched (the clypeus may be said to be indistinctly bidentate at apex); flagellum clavate; thorax but little longer than broad; pronotum with strong close punctures, very short medially, finely margined; dorsulum with larger separated punctures, those on scutellum, which is indistinctly impressed, still larger; middle segment short, almost vertical, broadly depressed posteriorly, with punctures about as strong as on dorsulum, but they are more rounded; petiole narrowly campanulate, distinctly longer than thorax, less gradually

widened than in *confluenta*, the widening commencing at about or behind middle, longitudinally impressed slightly above and transversely though not strongly before apex; second dorsal with close, rather strong punctures, much stronger than in *confluenta*; wings subhyaline, fuscous brown in interior half of costal cell; nervures and stigma dark brown. Length 9 mm.

Santarem. One specimen.

Eumenes cribrosa n. sp.

Q.—Deep black; a narrow line on each side of apical margin of petiole, a twice interrupted broader line on second dorsal, at apex, and a continuous one on segments 3 and 4, or 3-5, and fore tibiæ in front, yellow; flagellum fulvous beneath toward tip; head in front with thin silvery pile; front with close, large deep punctures, not impressed; ocelli almost in a straight line, the middle one placed slightly anterior to the others; clypeus convex, subcordate, about as broad as long, with two small approximate teeth at apex separated by a small triangular notch, with sparse shallow punctures; thorax almost square, cribrose, especially the mesopleuræ; pronotum in middle as long as first two joints of flagellum, finely margined, more closely punctured than rest of thorax; middle segment short, almost vertical, broadly though not deeply depressed posteriorly, its punctuation having a reticulate appearance; peticle at most as long as thorax, the stem tolerably stout, the enlargement beginning at about middle, strongly punctured, more or less impressed longitudinally, and distinctly so in a transverse manner before apical margin; second dorsal with tolerably large shallow punctures; second ventral slightly prominent medially, sparsely punctured toward sides, together with rest of abdomen clothed with pale sericeous pile; wings subhyaline, the costal cell anteriorly and a spot in base of marginal cell fuscous; nervures and stigma black. Length 9 mm.

Var. (?) $\$ Smaller; punctuation of front more separated; clypeus slightly shorter, more strongly punctured; stem of petiole more slender; a yellow spot in middle of hind margin of pronotum and at base of medial tibiæ. Length $7\frac{1}{2}$ mm.

Mararú, April, and Santarem. Six specimens, three of each form, both of which occur at the two localities.

Eumenes globicollis Spin.

Mararú, April; Santarem. Three specimens. These differ from the allied species in the collection by the shining impunctate abdomen. The thorax is almost square.

Eumenes gracilis n. sp.

♀.—Black; spot between antennæ, in the eye-emargination, hind orbits above, posterior margin of pronotum medially, anterior margin of scutellum and postscutellum sometimes, anterior tibiæ in front and line on segments 1-6 apically, yellow; antennæ beneath, pronotum posteriorly (sometimes anteriorly), two obscure spots on middle segment, and spot on petiole near base, reddish; body tolerably pruinose with pale pile, that on head in front, and thorax on sides and posteriorly, silvery; front with large, well-separated punctures, not impressed; ocelli forming a gently curved line; clypeus convex, longer than broad, sparsely punctured, terminating in two short approximate teeth (the head is not so much broader than long as in allied species); thorax longer than broad, with strong, deep, separated punctures, those on middle segment widest apart and more regular; pronotum with a distinct medial surface, margined anteriorly; punctures of dorsulum largest posteriorly; scutellum not impressed; middle segment but slightly depressed posteriorly; petiole very long and slender, longer than head and thorax, gradually enlarged from a point behind middle, impunctate, transversely depressed before apex; remainder of abdomen impunctate; wings dark subhyaline, darker along costa; nervures and stigma black. Length 7 mm.

Santarem. Two specimens. The long slender petiole, smooth abdomen, deep sieve-like punctures of front and thorax, and small size distinguish this species.

Eumenes fornicata n. sp.

♂.—Black; with pale sericeous pile, that on face and clypeus dense and silvery; spot behind insertion of antennæ, line in the eye-emargination, line on hind orbits above, spot on pronotum anteriorly at each side (sometimes absent), its posterior margin, narrow line at apex of petiole, and a broader one before the apex of segments 2–6, yellow, these latter segments brownish testaceous at apex; flagellum beneath, except medially, and tibiæ and tarsi more or less especially those of the four anterior legs, reddish;

head but little wider than long; front with strong nearly confluent punctures, distinctly impressed; ocelli forming a low curved line; clypeus convex, slightly longer than broad terminating in two stout widely separated teeth each of which is preceded by a short carina; thorax longer than broad, strongly punctured, the pronotum most closely; the latter sharply margined anteriorly, and with the anterolateral angles prominent, though obtuse; punctures of dorsulum largest posteriorly; scutellum impressed, with large sparse punctures posteriorly and closer ones posteriorly; middle segment with large deep punctures, slightly depressed at base, broadly and shallowly so posteriorly, rather densely pilose; petiole longer than thorax, basal stem tolerably stout, the enlargement beginning a little before middle and continuing gradually, deeply and sparsely punctured and highly convex, transversely impressed before apex; remainder of abdomen ovate, with rather strong close punctures above, much closer and finer than those of petiole; seventh ventral segment emarginate on each side near apex, or in other words the apical margin is medially produced or lobate; wings subhyaline, fuscous in costal and marginal cells; nervures and stigma blackish brown. Length 9 mm.

Santarem, November. Two specimens. From the several allied species known by the female only, these specimens seem to be distinct, by the head almost as long as broad. In this respect it is allied to *E. gracilis*, the two standing as connecting links between the species with head at least as broad as long and those with head broader than long.

2. Second segment either angulate, subangulate or tuberculate on either or both surfaces.

Eumenes deforma n. sp.

♀.—Black; clypeus, antennæ except flagellum above, pronotum, mesopleuræ, both scutella, two large blotches on metathorax, petiole along sides and above anterior to middle, and second segment on both surfaces at sides and apically, rufous; sides of clypeus, spot behind insertion of antennæ, in the eye-emargination, posterior orbits above, base of clypeus, posterior margin of pronotum, spot on each side anteriorly, dot behind tegulæ and an apical or subapical band on segments 1–5, yellow, the band on segments 3–5 more or less obscure; apical segments (3–6) testa-

ceous brown; legs brownish, tibiæ and tarsi lighter, the four anterior tibiæ more or less obscurely testaceous yellow; front with coarse, rather close, almost confluent, punctures, impressed; ocelli forming a low curved line; clypeus subquadrate, about as broad as long, with sparse, shallow punctures, terminating in two acute teeth separated by a triangular emargination; flagellum clavate; pronotum coarsely, finely margined; dorsulum more strongly punctured, especially posteriorly; scutellum more sparsely punctured, impressed; middle segment with large, coarse punctures, almost reticulate, the posterior surface deeply depressed or subconcave; petiole as long as head and thorax, the stem rather robust, and medially carinated longitudinally, the enlargement beginning behind middle, evenly convex above, and with large separated punctures, not depressed transversely before apex, but with a distinct dimple-like fovea at summit; second dorsal segment, when viewed laterally, elongate, subangulate anterior to middle, with fine, distinct punctures; second ventral segment with a transverse fold or tubercle near base, a little depressed medially; wings subhyaline, the costal cell (and marginal slightly) fuscous; third sub-Length 9 mm. marginal cell much longer than high.

Corumbá, April. Three specimens. The shape of second segment is very similar to that of *E. superficialis*, which belongs, however, to the group of species having the head about as long as broad.

Eumenes pilosa n. sp.

♀.—Black, with distinct pale brownish pile, especially on second dorsal segment, that on middle segment and petiole above longest; antennæ beneath fulvous; tips of mandibles ferruginous; line in eye-emargination bordering the orbit beneath, line on posterior orbit above, posterior margin of pronotum medially, tips of anterior femora and anterior tibiæ in front, spot at each side of apical margin of petiole, and subapical band on second segment, yellow; the remaining segments margined with testaceous; fore tibiæ posteriorly testaceous brown; front with deep, separated punctures, indistinctly impressed; ocelli forming a very low curved line; clypeus convex, broader than long medially, with large shallow punctures, and terminating in two acute teeth separated by a tolerably large rounded notch; pronotum with deep punctures,

stronger than those of front, finely margined, its medial surface very short; dorsulum punctured anteriorly like pronotum, more strongly behind; tegulæ strongly punctured except basally; scutellum more sparsely punctured, impressed; middle segment with punctures about as strong as those on pronotum, deeply concave medially, presenting two strongly convex surfaces, the sides at base with a series of coarse folds, which are separated from similar folds on metapleuræ by an elongate, narrow, raised, smooth area; petiole longer than thorax, but hardly equalling the length of head and thorax, the enlargement beginning behind middle, with strong separated punctures, transversely depressed before apex, the depression preceded by a dimple-like fovea; second dorsal with finer, closer punctures, the second ventral swollen or subtuberculate near base; wings subhyaline, costal cell fuscous anteriorly; costa brownish; nervures blackish; third submarginal cell much longer than broad. Length 9 mm.

Rio de Janeiro and Chapada, November. Two specimens.

Eumenes tegularis n. sp.

Q.—Black; antennæ (flagellum darker above), prothorax, mesopleure, tegulæ except base, scutellum, postscutellum, in part, middle segment on sides, tibiæ, tarsi, femora in part, petiole at sides apically, second dorsal at sides and apically, second ventral apically, rufous; spot behind insertion of antennæ, in eyeemargination, posterior orbits above, hind margin of pronotum, dot behind tegulæ, hind margin of postscutellum and apical margin of petiole, yellow; segments 3-5 with testaceous margins and a testaceous yellow subapical band, the second segment without yellow; front with strong rather irregular punctures, indistinctly impressed; clypeus convex, broader than long, terminating in two approximate teeth, with sparse, shallow punctures; pronotum with a distinct medial length, with deep punctures, scarcely margined anteriorly; dorsulum with large more separated punctures, with a distinct furrow anteriorly in middle, and with two parallel longitudinal impressions apically; tegulæ coarsely punctured; scutellum deeply punctured, impressed; middle segment short, coarsely and confluently punctured in depressed portion, on the sides rather reticulate, and above on each side of middle the punctures are deep and sparse; petiole about as long as thorax, basal stem stout and rather short, the enlargement beginning before middle, with strong separated punctures, transversely depressed before apex, and depressed above in the shape of a fovea; second dorsal with shallow, separated punctures, those at base deeper; second ventral with a prominent tubercle in middle, punctured laterally; wings fusco-hyaline, darker in costal cell; nervures and stigma dark; third submarginal higher than long. Length 8 mm.

Corumbá, March; Chapada, April. Two specimens.

Eumenes tuberculata n. sp.

Q.—Black; scape, flagellum beneath, mandibles, pronotum except two dark blotches, mesopleuræ, two stripes on dorsulum, scutellum, postscutellum in part, two blotches on middle segment, sides of petiole apically, second dorsal at sides and apex, and apical half or more of second ventral, rufous; tegulæ externally and apical segments testaceous brown; the legs from apex of femora reddish or testaceous-brown; spot behind insertion of antennæ, in eye-emargination, hind orbits above, posterior margin of pronotum, dot behind tegulæ, hind margin of postscutellum and apical margin of petiole, yellow; the extent of rufous on abdomen is variable, and sometimes there is a yellow subapical line on second dorsal; front with deep, rather evenly separated punctures, faintly impressed; clypeus convex about as long as broad, with large, shallow, scattered punctures, terminating in two approximate teeth; thorax with large, deep, separated punctures, largest on dorsulum and scutellum, the latter rugoso-punctate; pronotum with a distinct medial surface, finely carinated; middle segment depressed posteriorly, above laterally with large deep punctures, otherwise reticulato-punctate, finest on sides which at base are marked by a series of short folds which are separated from similar folds on metapleuræ by an elongate, narrow, smooth area; tegulæ impunctate; petiole tolerably stout, about as long as thorax, the enlargement beginning at about middle (the stem therefore longer than in E. tegularis), with strong separated punctures, transversely impressed before apex, but with the fovea or pit at summit as in E. tegularis; punctuation of second dorsal varying, either shallow or deep; second ventral with a prominent tubercle medially; wings subhyaline, broadly fuscous along costal margin to apex; nervures and stigma black; third submarginal higher than long. Length 7-8 mm.

Var. (?). Coloration darker; punctuation more even; petiole with stem slender.

♂.—Colored like ♀, and similarly punctured; petiole a little longer than thorax, the enlargement beginning behind middle, with an indistinct pit or fovea before apex; ventral tubercle larger; flagellum clavate; seventh ventral plate rounded at apex, smooth; wings paler, much less strongly fuscous along costa. Length 7 mm.

Corumbá, April, May. Twenty-four females; one male.

- AA. Petiole of abdomen with a short thick base, the apical portion lengthened, with its sides more or less parallel.
 - a. Second segment not or but little compressed.

Eumenes chalicodomæ Sauss.

Ten specimens. Chapada, February, March; Corumbá, April; Santarem. The amount of rufous on head and thorax is variable, and the apical yellow fascia of petiole is sometimes wanting.

Eumenes canaliculatus Oliv.

A large series of both sexes, from various localities. The wings vary from fuscous to yellow fuscous, and the thorax from dark brown to light rufous; the dorsulum may be entirely reddish or maculated with black. The varieties in the collection before me are as follows:

- I. Wings dark fuscous.
- 1. Dorsulum entirely red.
- 2. Dorsulum with a black median stripe and lateral spot.
- II. Wings fuscous, tinged with yellow, especially along costa.
- 1. Dorsulum entirely red.
- 2. Dorsulum with a median black stripe.
- 3. Dorsulum with a black median stripe and lateral spot.
- aa. Second segment compressed.

Eumenes filiformis Sauss.

Santarem. One specimen.

Eumenes rufomaculata n. sp.

♀.—Black; clypeus except medially, scape, pedicel, pronotum, mesopleuræ, two large spots on dorsulum, scutellum, postscutellum

except base, outer margin of tegulæ broadly, middle segment except medially, four anterior femora except above, the hind pair at tip, tibiæ, tarsi, sides of petiole, second segment, except medially on basal two-thirds, rufous; remaining segments brownish or reddish brown apically; head and thorax above with dense short brownish hairs; sides of thorax with pale pile; spot between insertion of antennæ and hind orbits above yellowish; front with deep separated punctures, depressed on each side before the eyeemargination; clypeus elongate, about as long as scape and pedicel, not carinate, its fore margin broadly but not deeply notched, or bilobate; flagellum rather long, subclavate; pronotum with deep, rather close punctures, finely margined, obtuse laterally; dorsulum a little less deeply punctured, with an impressed line anteriorly in middle; scutellum, postscutellum and middle segment with larger, more separated punctures, the former not impressed, the middle segment deeply, though not broadly, concave posteriorly, petiole linear, much longer than head and thorax, strongly punctured and longitudinally impressed above, gradually, and but little, widened from very near base, the sides almost parallel, transversely depressed before apex, basal stem short; remainder of abdomen compressed, especially the second segment, which has brownish pile and is deeply and compactly punctured above, beneath depressed a little on each side and longitudinally raised down middle; wings fusco-hyaline; nervures and stigma black. Length 14-15 mm.

Pedra Branca and Corumbá, April. Two specimens.

Eumenes fulvomaculata n. sp.

\$\Phi\$.—Black; clypeus, spot between insertion of antennæ, hind orbits, pronotum except a dot on each side, a triangular spot, varying in size, on each side of dorsulum close to pronotum, scutellum except posteriorly, postscutellum, middle segment except medially and sides, mesopleuræ above, a stripe on its lower moiety, sides and apical margin of petiole, large spot on each side of second dorsal from which a narrow line of the same color extends around the sides and apical margin of the segment, and second ventral except basally, pale yellow; tips of mandibles, flagellum beneath, scape beneath at base, tips of femora, the anteriors beneath, tibiæ, tarsi, except posteriors which are dark, rufous or

reddish yellow; apical segments yellowish testaceous; front as in rufomaculata, but not quite so strongly punctured; clypeus if anything slightly longer and narrower; pronotum with shallow punctures, finely margined, rounded laterally; dorsulum with deep separated punctures, the medial impression of base not very strong; scutellum with large sparse punctures, fewest basally; middle segment deeply and narrowly concave medially, the concavity narrower than rufomaculata, with its walls steeper; punctures of middle segment rather shallow, those on sides deeper, but not larger; petiole almost linear, longer than head and thorax, medially impressed and strongly punctured above, the gradual enlargement beginning very near base, and then slightly contracted at about middle, so that the sides are somewhat sinuous, a transverse depression before apex; second dorsal segment compressed, with strong dense punctures becoming feeble and sparse on sides; wings fusco-hyaline, nervures and stigma black. 15 mm.

Santarem. Two specimens.

Table of New Species of Eumenes.

1.	Petiole of abdomen with a long slender base, swollen at apex, or campanulate
	Petiole of abdomen with a short thick base, the enlarged
	apical portion usually lengthened, with its sides more or less
	parallel
2.	Head from front at least as long as broad, the clypeus longer
	than broad
	Head broader than long, the clypeus broader than long, or its
	width equalling its length
3.	Petiole short, campanulate 4
	Petiole at least as long as thorax
4.	Black; mandibles reddish yellow; wings fuscous on basal half,
	apically subhyaline bipartita \circ .
	Testaceous yellow, variegated with black; wings subhyaline,
	yellowish along costa testacea ♀♂.
5.	Greater part of thorax black 6
	Greater part of head, thorax and legs yellow; wings subhya-
	line yellowish along costa pictur ata o.
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6.	Abdomen with petiole alone maculated with yellow 7 More than one segment maculated with yellow 8
7.	Petiole distinctly punctured, remainder of abdomen impunctate; petiole with a U-shaped yellow mark near base insignis \mathcal{L} .
	Abdomen entirely smooth; petiole with a reddish spot near base læviventris \mathcal{C} .
8.	Second dorsal segment apically with a broad yellow band covering one-third or nearly half the segment 9
9.	Fascia of abdomen narrow
	Viewed laterally the second segment is elongate, subangulate above and beneath between base and middle superficialis $\mathcal{P}_{\mathcal{O}}$.
10.	Thorax more or less variegated with rufous; form stout. 11 Thorax not rufous, maculated with yellow; sides of petiole usually yellow
11.	Clypeus longer than broad, maculated distinctly in both sexes; greater part of thorax suffused with rufous; vertex with distinct though not strong punctures . suffusa \mathcal{C} . Clypeus almost as long as broad, maculated in \mathcal{C} only; rufous on pronotum only, though sometimes marking either or both scutella; vertex strongly punctured compacta \mathcal{C} .
12.	Viewed from side the second segment is evenly convex above and beneath
13.	Yellow and black, the greater part of thorax and petiole yellow tinged with brown or reddish; legs yellow and light brown
14.	Pronotum, scutella, two stripes on middle segment (and petiole apically in \mathcal{S}) rufous, and maculated with yellow as well tinctura \mathcal{S} .
	Without rufous

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15.	Thorax short, almost square			
16	Thorax distinctly longer than broad			
10.	nor coarse; pronotum with scarcely any medial surface 17			
	Thorax cribrose; pronotum with a distinct medial surface. 18			
17.	Punctures of vertex irregular and somewhat confluent; both			
	scutella yellow anteriorly confluenta ?.			
	Punctures of vertex even, separated; scutella entirely black			
	$proxima \ ?.$			
18.	Petiole with basal stem tolerably stout $cribrosa$ \circ .			
	Petiole with basal stem slender cribrosa ? Var. (?).			
19.	Punctures of thorax very deep and widely separated; petiole			
	unusually slender, longer than head and thorax, and with			
	second dorsal, impunctate gracilis \mathcal{P} .			
	Punctures of thorax closer and less deep; petiole and second			
00	dorsal punctured 20			
20.	Petiole less distinctly punctured than second dorsal, the en-			
	larged portion, seen from the side, evenly and not very highly, convex $invenusta \ \ $			
	Petiole more strongly punctured than second dorsal, the en-			
	larged portion, seen from the side, highly convex or arched			
	fornicata 3.			
21.	Second dorsal segment, viewed laterally, subangulate toward			
	base, its upper surface appearing flat, having a straight con-			
	tour (insect marked with rufous) deforma ?.			
	Second dorsal segment convex			
22.	Thorax or abdomen not marked with rufous; abdomen with			
	short, thin, brownish hairs, especially on second dorsal			
	$pilosa$ \circ .			
22	Thorax or thorax and abdomen more or less reddish 23			
23.	31			
	entirely black; tegulæ punctate $tegularis \ \ $ Clypeus about as long as broad; petiole more slender; dorsu-			
	lum with two red stripes; tegulæ impunctate			
	tuberculata \mathcal{C} .			
24.	Thorax maculated with rufous $rufomaculata \ \ \varphi$.			
	Thorax maculated with yellow fulvomaculata \mathcal{P} .			
Montezumia chalybæa Sauss.				
O	ne specimen. Santarem.			

Montezumia brunnea Sauss.

Three specimens. Chapada, February, April.

Montezumia Leprieurii Spin.

Chapada, January; Santarem, February. Four specimens.

Montezumia cærulea Sauss.

Numerous specimens of both sexes. Chapada, March, April; Santarem. *M. azureipennis* Saussure I regard as a mere variety of cærulea.

Montezumia infundibuliformis Fabr.

Santarem. Eight specimens.

Montezumia cortesia Sauss.

Rio de Janeiro, November. *M. sepulchralis* is, no doubt, a distinct species, and not a variety of *cortesia*, as intimated by Saussure.

Montezumia analis Sauss.

Two specimens. Santarem.

Montezumia Spinolæ Sauss.

Numerous examples from various localities.

Montezumia sparsa n. sp.

♀.—Black; mandibles, margin of tegulæ, middle segment, postscutellum sometimes (more rarely both scutella), metapleuræ,
mesopleuræ beneath, legs except part of coxæ, and first abdominal
segment ferruginous; wings blue-black; two dots on postscutellum
and line at apex of first segment, yellow; clypeus with sparse,
shallow, punctures, its fore margin broadly incurved, subdentate
laterally; pronotum scarcely margined, with deep, confluent though
not close, punctures; dorsulum with punctures well separated, with
a narrow, smooth line anteriorly in middle; middle segment more
broadly, therefore less deeply, depressed than in Spinolæ; first
abdominal segment a little narrower, more rounded at sides, less
pilose; second dorsal with sparse shallow punctures medially, the
second ventral shining with much larger, sparse punctures. Length
19-22 mm.

Chapada, March. Six specimens. I had at first considered these as a mere variety of *M. Spinolæ*, but the differences in sculpture of thorax and abdomen, as well as the different coloration of the former, induced me to describe it as distinct. The clypeal teeth

are much more distinct than in Spinolæ, and the clypeus seems longer.

Montezumia ferruginea Sauss.

Corumbá, February, April; Pedra Branca, April. Four specimens. These represent the entirely ferruginous form mentioned by Saussure. In one example the abdomen, except first segment, tends to brownish or subfuscous.

Montezumia anceps Sauss.

Rio de Janeiro, November; Uacarizal, February. Two specimens probably represent this species.

Montezumia macrocephala Sauss.

Fifteen males, eight females. Chapada, March, April, October.

Montezumia carinulata (Spin.) Sauss. has maxillary palpi six-, the labial palpi four-jointed. I have therefore transferred it to Nortonia.

Monobia angulosa Sauss.

Numerous specimens.

Monobia funebris Grib.

Four specimens. Corumbá and Mararú, April; Santarem. I am inclined to regard this as a variety of *M. apicalipennis* Sauss.

Monobia curvata n. sp.

\$\varphi\$.—Black; head except part of front, scape, pedicel and base of first flagellum joint, thorax above almost entirely including the upper portions of meso- and metapleuræ, fore legs except base, the medial and hind femora and tibiæ in front, rufous; the dorsulum and scutella are more or less blackish, sometimes these parts are entirely black; inner orbits beneath and spot at base of mandibles, yellow; wings blue-black, with a narrow pale apical margin; clypeus subpyriform, with large rather shallow punctures, its fore margin subtruncate, subdentate laterally; front coarsely punctured; space between hind ocelli equal to or slightly less than that between them and eyes; thorax with tolerably deep, close punctures, more separated on dorsulum; middle segment above with much larger punctures, the concave area smooth, sides roughly angulate or subdentate, but not spinose; dorsal surface of abdomen with fine, close punctures, those on second segment sparse

medially, the ventral surface with larger, shallow, separated punctures. Length 16-17 mm.

S.—Colored like female but more coarsely sculptured; clypeus shorter, finely punctured, and in addition with a few shallow punctures, its fore margin more incurved; flagellum rufous apically; space between hind ocelli slightly greater than that between them and eyes; first joint of median tarsi stout, curved, clothed with pale hairs within, not much, if anything, longer than half its tibia.

Chapada, March, November. Five females, two males. Seems to be close to *M. anomala* Sauss. There is quite a distinction between the males of this species and *angulosa* Sauss, in the shape of the first joint of middle tarsi.

Nortonia carinulata Spin. (= Montezumia carinulata (Spin.) Sauss.).

One specimen. Chapada, November. In the six-jointed maxillary -, and four-jointed labial palpi, this insect differs from *Montezumia*, in which genus de Saussure placed it, founding therefor the division *Parazumia*, which name will probably take precedence over *Nortonia*, which was not described until twenty-five years later.